

**DECISION**



**THE COMPTROLLER GENERAL  
OF THE UNITED STATES**  
WASHINGTON, D.C. 20548

**FILE:** B-207376

**DATE:** September 21, 1982

**MATTER OF:** Polymer Chemicals, Inc.

**DIGEST:**

1. Protest against award of a contract calling for sewer line sealing--on the basis that the solicitation specification requiring a polyurethane-based sealant is exclusionary in nature--is denied since the agency's determination that the specified product is necessary to fulfill its minimum needs has not been shown to be clearly unreasonable.
2. Specification of a requirement for the use of a polyurethane-based grout which is produced by only one company is not prohibited where this requirement is necessary to meet the minimum needs of the Government.

Polymer Chemicals, Inc., protests any award of a contract under solicitation No. DABT10-82-B-0116, issued by the Department of the Army, Fort Benning, Georgia, for inspection and repair of sanitary sewer lines. The work required under the solicitation includes sealing with chemical grout all defective sewer pipe joints. The protester asserts that the specifications are restrictive because they require the grout used in sealing the sewer pipes to be polyurethane-based. Polymer submits that it should be allowed to bid on the basis of using an acrylamide-based grout which, the protester contends, is the equal of polyurethane grout. The Army determined that acrylamide grout will not satisfy its minimum needs and therefore continues to require the use of a polyurethane grout.

We deny the protest.

Our Office consistently has held that contracting agencies are primarily responsible for determining and accommodating their minimum needs. The agencies are in the best

position to ascertain their needs due to familiarity with particular requirements and the environment in which the product will be used. Thus, our Office will not question an agency's determination of its minimum needs, or the technical judgment forming the basis for that determination, unless it is clearly shown to be unreasonable. Municipal & Industrial Pipe Services, Ltd., B-204595, January 18, 1982, 82-1 CPD 39.

The Army's determination that acrylamide gel is not suitable for use as a chemical grout to seal sewer lines at Fort Benning, and that a polyurethane grout is required to meet the Government's minimum needs is based on the following factors as stated by the contracting officer:

"a. Fort Benning has basically two types of soil, sand and clay, [for] which the use of acrylamide gel is not feasible. Attempts to grout pipe surrounded by sandy soil which has high porosity results in poor grouting efficiency because the acrylamide permeates too rapidly. Impermeable soil such as certain types of clay normally don't need grout around pipe joints unless pockets have been formed due to broken connections. Groundwater also affects the use of acrylamide gel because of the dispersion of the chemical before gelation time occurs.

"b. Polyurethane foam or gel has a higher tensile strength and is more shear-resistant to lateral pipe movement than acrylamide gel. The majority of the sewers at Fort Benning are situated in low lying areas which tend to be more unstable than higher elevations; therefore, a more resilient and flexible joint sealer having the characteristics of polyurethane foam or gel is required.

"c. Polyurethane foam or gel is primarily a joint sealer and does not have to permeate the soil around the joint, whereas acrylamide gel does have to permeate the soil to get a thorough seal.\*

---

\*The Army subsequently has revised its finding with regard to polyurethane gel by noting that that form of polyurethane-based grout does have to penetrate voids surrounding the pipe joints to be an effective sealant.

"d. In its uncured form, polyurethane foam or gel is less toxic than acrylamide gel, which lends itself to being safer to use by the unwary construction worker. Precautionary measures for handling and storing acrylamide are much more stringent than for polyurethane because of [acrylamide's] high toxicity. The acrylamide gel must be mixed at the job site, and, prior to mixing, the components are highly hazardous. Improper mixing or accidental spills could result in contamination of the ground water in the project area."

The Army reports that these factors were derived from "observations, printed material [of] the suppliers, and past experience in the utilization of the two chemicals."

Polymer disagrees with the Army's determinations and has furnished us copies of statements from consulting engineers and other reports in the field of sewer grouting which, the protester contends, support its belief that polyurethane and acrylamide grouts are equally suitable for the Fort Benning requirement. In essence, Polymer asserts that its evidence shows that both types of grout are capable of performing adequately in the soil conditions at Fort Benning. Furthermore, Polymer contends that polyurethane grout's tensile strength advantage over acrylamide grout is of no consequence because it is the compressive strength of a grout which is important. Moreover, with regard to toxicity and environmental concerns, Polymer argues that both polyurethane and acrylamide are dangerous chemicals, but that both are safe when handled properly.

In rebuttal to Polymer's contentions that acrylamide and polyurethane grouts would be equal under the soil conditions at Fort Benning, the Army notes that because of the differences in the viscosity of the two chemicals, it would take a greater quantity of acrylamide grout than polyurethane grout to seal a particular sewer joint. In the Army's judgment, large quantities of low viscosity acrylamide would be lost as it permeated "like water" into the surrounding soil before the sealing of the sewer pipe joint could be completed. On the other hand, Army reports that the more viscous polyurethane permeates the soil slowly--"like a liquid with an oily base"--while the joint sealing is being completed.

With regard to Polymer's belief that the tensile strength advantage which polyurethane has over acrylamide is of no consequence in this procurement, the Army submits that since the sewer pipes in question will deflect and move with varying soil conditions and loading, tensile strength and elongation of the chemical sealant is important. In this regard, it is the Army's opinion that tensile, as well as compressive strength, is important because any time an object is compressed on one side, the opposite side will be under tension.

In response to Polymer's statement that acrylamide does not represent a toxic danger, Army cites Polymer's "Chemical Grout User Manual" which states that acrylamide is a known neurotoxin in man; is readily absorbed through the skin in sufficient quantity to cause systemic toxicity, and that oral ingestion may occur from careless working habits. The Army concludes that acrylamide is toxically unacceptable and notes that in comparison with acrylamide grout, polyurethane grout is "practically non-toxic."

After considering the entire record, we conclude that the Army's determination to fulfill its minimum needs by requiring a polyurethane grout--while disputed by Polymer--has not been shown to be clearly unreasonable. We recognize that reasonable men may differ in their opinions as to the efficacy of various materials to be used in cases such as this one; we also understand that many substances are toxic but safe for use if properly handled. Nonetheless, we are of the opinion that the requiring activity is in a better position to judge its minimum needs than we are. In this respect, we note that the acrylamide material apparently has been used successfully on municipal sewer systems with similar soil conditions; yet the material is considerably more toxic than polyurethane based grout and great care must be taken in its handling and application. We believe that the Army's justification for polyurethane grout based on toxicity and environmental concerns is sufficient in itself--even if all other facets of the two grouts were equal--to provide reasonable support for the Army's requirement for a non-toxic polyurethane grout.

Polymer's contention that the grout specification is proprietary and sole source apparently is based on the fact that only one company--3M--manufactures the appropriate polyurethane-based grout. In this connection, we recognize that specifications should not have any restrictive features which might limit acceptable offers to one supplier's

product. However, this does not prevent specification of requirements that only one supplier is able to produce, provided these requirements meet the minimum needs of the Government. See United Paint Manufacturing, Inc., B-181163, June 25, 1974, 74-1 CPD 343. In this regard, we observe that the requirement for a specific grout relates to supplies only and does not preclude competition for the work.

The protest is denied.

*Harvey R. Jones*  
Comptroller General  
of the United States